

## CLAIMS

1. A method for spraying coating liquids, whereby coating liquid is sprayed from a spray system through a liquid atomizer in the form of an irrotational nozzle or in the form of a rotary atomizing element onto an object to be coated,

characterized in that at least one component (4) of the spray system (2), where the coating liquid may deposit on said component and cure on it, shall be cooled by a fluid, cooled coolant that is fed to said component during spray coating in order that the cooling of this component (4) shall reduce or prevent the adhesion and/or the drying rate and the layering of coating liquid on a surface (24) of said component.

2. Spraying method as claimed in claim 1, characterized in that the coolant is fed to the liquid atomizer, in particular when latter is a rotary atomizing element (4) in order to cool a surface (24) at said atomizer, where said surface is in ambient air and under the stream of liquid coating.

3. Spraying method as claimed in either of claims 1 and 2, characterized in that a compressed gas, preferably compressed air, is used as the coolant.

4. Spraying method as claimed in claim 3, characterized in that the compressed gas is blown onto a surface (22) of the component (4) to be cooled, where the coating liquid does not stream over said surface.

5. Spraying method as claimed in one of the above claims, characterized in that the coolant is cooled by a cooling element (10) situated at or in the spray system (2).

6. A spray system for coating liquids, comprising a liquid atomizer in the form of an irrotational nozzle or in the form of a rotating rotary atomizing element (4) to spray the coating liquid onto an object to be coated,

characterized by

a cooling unit (6) cooling a component (4) of the spray system (2) by means of a fluid, cooled coolant during spray coating, where there is danger regarding said component (4) that coating liquid may deposit and cure on it, the cooling of said component (4) reducing or preventing both the coating liquid's adhesion to and/or the drying rate on and its layering on a surface of this component (4).

7. Spray system as claimed in claim 6, characterized in that the coolant can be fed by the cooling unit (6) to the liquid atomizer (4) in particular when latter is a rotary atomizing element in order to cool an atomizer surface (24) which is situated in ambient air and underneath the streaming coating liquid.

8. Spray system as claimed in either of claims 6 and 7, characterized in that the coolant is a compressed gas, preferably compressed air.

9. Spray system as claimed in claim 8, characterized in that the cooling unit is fitted with a compressed-gas discharge (20) to blow cooled compressed gas onto a surface

(22) of the component (4) to be cooled, where the coating liquid does not stream over said surface.

10. Spray system as claimed in one of claims 6 through 9, characterized  
5 in that it comprises a cooling element (10) of the cooling unit (6) to cool the coolant, where said element is configured at the spray system (2) or is integrated into it.

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